Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	CC Docket No. 96-45
Federal-State Joint Board on	)	
Universal Service	)	

REPLY COMMENTS OF U S WEST, INC.

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SUMMARY

While the initial comments filed in this proceeding deal with a multitude of complex issues, U S WEST, in the interest of efficiency (and in compliance with the prescribed page limit), confines its reply comments to three major issues.

Despite repeated explanations by U S WEST and others of the intended scope and limitations of the Benchmark Cost Model, parties continue to argue against its use, citing what the Model will not do. In these reply comments, U S WEST again explains what the BCM was designed to do and again explains what it was not designed to do. U S WEST again declares its support for the Benchmark Cost Model and again demonstrates why this model is the most reasonable and appropriate foundation for determining universal service high-cost funding. The BCM presents no bias toward either incumbent LECs or new entrants and allows for the most efficient evolution of local competition, without the artificial influence of high-cost funds. The BCM's strength lies in its reasonableness and moderation.

Second, we discuss the scope and intent of the federal interest in universal services matters and funding. It is incumbent upon the Commission to keep in mind at all times in this proceeding and others the clear message from Congress that the issues the Commission has been asked to address are national, not local or regional, issues. This is not to say that state and local governments will have no role, but the Commission must set the tone and advance the benefits of universal service always on behalf of the citizens of the United States.

Last, we discuss the most appropriate funding mechanism for determining the universal service high-cost fund, again showing why such telecommunications service provider funding based on interstate retail revenues is the most broadly based, competitively neutral mechanism.

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Below U S WEST, Inc. (or "U S WEST") addresses only three issues from among the many and complex issues raised in the Comment stage of the current proceeding. First we address the strength and balance of the Benchmark Cost Model ("BCM" or "Model"), as that Model is endorsed by the Joint Sponsors.[1] The BCM was a careful, cautious effort by a number of telecommunications providers, with varying interests, to craft and design a workable model to address the targeting of high-cost funding in a universal service environment.

In these Comments, U S WEST will respond to misuse of the Model. As has only been made more obvious by the most recent round of comments, the strength of the BCM using the ARMIS cost factor lies in its eminent reasonableness and moderation. Despite repeated references to and descriptions of the purpose of the BCM, as well as its scope, relevance and validity to the purpose for which it was created,[2] commentors have, increasingly, deemed it permissible to unilaterally modify the BCM model, its assumptions, and its potential utility. Below, we comment on the inappropriate nature of these modifications for the targeting of high-cost support.

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[1] The Joint Sponsors include U S WEST, Sprint Corporation ("Sprint"), The NYNEX Telephone Companies ("NYNEX") and MCI Telecommunications Corporation ("MCI").

[2] In the transmittal letter for the BCM results, the following statement appears: "The Joint Sponsors support the use of the BCM for the analysis of the targeting of explicit high cost support. They do not agree on its use for other purposes such as the setting of rates for telephone service." Letter from Glenn Brown, U S WEST, Inc., et al. to William F. Caton, FCC, filed Dec. 1, 1995, at n.*. And see Letter from Glenn Brown, U S WEST, Inc. to Richard Metzgar, FCC, dated April 16, 1996, at 2 (attached hereto as Appendix B).

Second, we address the scope and extent of the federal interest in universal services matters and funding, particularly in light of the Telecommunications Act of 1996.[3] That interest should not be defined or confined by the Federal Communications Commission's ("Commission" or "FCC") traditional jurisdictional cost separations theory or rules.[4] Separations rules are simply not well-suited to addressing "larger" universal service issues and those rules should not be allowed to "force fit" the most optimal solution to universal service high-cost funding.

Finally, U S WEST addresses the matter of the most appropriate funding for the universal service high-cost fund (or "HCF"). We note considerable support for our position that funding should be accomplished broadly, specifically *via* telecommunications service provider funding based on retail revenues. We encourage the Commission to adopt this approach, particularly in light of its competitive neutrality.

I. THE BCM FILED BY THE JOINT SPONSORS IS THE MOST REASONABLE AND APPROPRIATE FOUNDATION TO EMPLOY IN DETERMINING UNIVERSAL SERVICE HIGH-COST FUNDING

A. The Joint Sponsors' BCM Proposal Is Non-Biased As It Addresses High-Cost Funding Issues

As we have throughout the various proceedings on universal service since 1994, U S WEST herein reiterates our support for the BCM, utilizing ARMIS factors (referred to throughout the remainder of this filing as the "BCM/ARMIS" or "Model")[5] within the context of universal service high-cost funding. Of those commentors

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[3] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) ("1996 Act" or "Act").

[4] Certainly, it would be inappropriate to argue that the Commission has only a "25% interest" in universal service matters, including high-cost funding.

[5] Below, the Commission will see references to the "BCM" without the reference to ARMIS. This will be within the context of discussing the original crafting and designing of the BCM and its basic model assumptions. See pp. 7-17, below.

supporting proxy models, in the first instance, the majority support the BCM/ARMIS,[6] albeit sometimes only if certain "corrections" are made to the Model.[7]

The BCM/ARMIS Model suffers from neither incumbent local exchange carrier ("LEC") nor new-entrant bias. It allows for the most efficient evolution of local competition, without the artificial influence of high-cost funds. The BCM/ARMIS is the model that provides the best targeting of customers who reside in areas that are high-cost to serve and permits the Commission to meet its Congressional mandate to assure affordable basic service for all Americans.

The BCM/ARMIS does not seek to base explicit federal high-cost support on an incumbent's actual book costs.[8] Instead, the BCM/ARMIS utilizes a cost structure that could be expected from a new entrant, a company utilizing current technology at current costs. This cost is less than the embedded cost base of incumbent LECs. Thus, the BCM/ARMIS cost structure assumptions are not biased in favor of incumbent LECs.

Neither, however, is the BCM/ARMIS biased in favor of new entrants. While utilizing a cost structure that could be associated with a new entrant, the BCM/ARMIS's use of Census Block Groups ("CBG") as the geographic unit inherent in the Model neutralizes what would otherwise be a predictable new-entrant bias, i.e., the

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[6] Comments on the BCM generally fall into two broad categories: those parties that support the use of proxy models for establishing a high-cost fund; and those parties that support the use of actual or book costs for establishing a high-cost fund. For example, BellSouth Corporation, et al. and Southwestern Bell Telephone Company fall into the latter category.

[7] See, e.g., NCTA Comments at iii (a proxy model should be used to determine USF support levels and the BCM is currently the best available model, although it might require certain corrections); 9-10 (BCM is superior to model proposed by Pacific Telesis);Teleport Communications Group, Inc. Comments at 7 (while the BCM is not without its shortcomings, those shortcomings are generally identifiable and potentially correctable); NASUCA Comments at 19 (the Commission should adopt a proxy cost model that calculates forward-looking verifiable cost estimates); 20-21 (BCM is superior to model proposed by Pacific Telesis); and see also AT&T Corp. ("AT&T") Comments at App. A.

[8] Of course, incumbent LECs are entitled to full recovery of their reasonable actual costs, through a combination of universal service funding and rates to customers.

use of wire centers as the geographic unit. As the comments demonstrate, a number of potential new entrants support a wire center approach to targeting high-cost support.[9] But, as the evidence demonstrates, using wire centers as the basic geographic unit for targeting high-cost support allows new entrants access to high-cost support regardless of whether they ever actually serve high-cost customers.[10]

The self-serving nature of the arguments made by the potential new entrants is self evident. By arguing for wire centers, rather than CBGs, as the basic geographic unit for targeting, potential new entrants seek to lessen the total amount of the universal service HCF, with the corollary that the support new entrants would have to contribute (either individually or collectively) to the fund would also be minimized. At the same time, because of the cost averaging that occurs with wire center utilization, the amount such new entrants would theoretically be able to withdraw from the fund would be increased. [11]

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[9] Some new entrants, such as NCTA, argue for a variation on the basic theme. NCTA supports the use of the BCM to determine CBG specific costs, but proposes that high-cost support be provided only at the wire center level. NCTA Comments at 10.

[10] In our opening Comments, U S WEST presented credible, persuasive evidence on the issue of why "wire center targeting" was not appropriate for the targeting of high-cost support. U S WEST Comments at 12 n.25 and App. A. Wire center targeting would allow a cable company, for example, to serve a "wire center" by actually providing service only to customers near the in-town central office. The cable company would receive "high-cost assistance" to serve customers that were not high cost to serve (perhaps even making a profit on the difference between its actual costs and the money it received for serving the "high-cost area"). And, it would not serve customers who in fact were high cost to serve, i.e., those at the outer edges of the wire center. Those customers would be left to the incumbent service provider -- who would also need high-cost funding to serve those customers. This is not a good economic or policy result. Wire center "targeting" is simply not the best targeting. Given the fact that nothing absolutely drives one to that level of targeting, it should be rejected as contrary to sound economics and prudent universal service public policy.

It is encouraging that some parties who do not even support the concept of "proxy models" see the benefits of targeting high-cost fund support at smaller geographic areas than wire centers. GVNW's Comments (at 13) would, for example, find the BCM an acceptable tool to disaggregate actual (as opposed to proxy) costs below the wire center level.

[11] This "give a little, get a lot" approach to universal service funding issues is, obviously, not one that strikes the most balanced economic or public policy resolution of the complex issues involved.

By utilizing CBGs, rather than wire centers, new entrants are unable to game the "high-cost" aspect of the high-cost fund. Under the BCM/ARMIS, new entrants are virtually precluded from receiving high-cost support when they do not serve customers who are, in fact, high cost to serve. Certainly, a laudable policy result.

Given the BCM/ARMIS is not biased in favor of either incumbent LECs or new entrants, it represents the clear "voice of reason" in the high-cost funding debate. While there are those from the original Joint Sponsors group who have apparently left the fold and now appear to have adopted something of a revisionist history of the scope of the BCM, its purpose, and its assumptions,[12] the fact that U S WEST and Sprint continue to support the model is strong evidence of the model's reasonableness and balance. Between the two companies there are represented LEC, interexchange carrier ("IXC"), competitive access provider ("CAP"), and cable company interests.

It is difficult to imagine a proxy model more in line with the broad range of telecommunications provider interests than the BCM/ARMIS, as evidenced by the continuing support of U S WEST and Sprint. The BCM, as modified by the currently planned enhancements,[13] provides a competitively neutral method of determining high-cost areas and providing support for any eligible telecommunications carrier serving a high-cost CBG. And the Model's demonstrated superiority is not evident just at the provider level.

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[12] MCI, through its work with Hatfield Associates ("Hatfield"), began this process somewhat early on. Until recently, however, MCI was cautious in promoting the more extensive revisions that Hatfield argued needed to be made to the BCM. For example, in the State of Washington, the Hatfield Study was introduced through the advocacy of AT&T, rather than that of MCI (although MCI "supported" the AT&T advocacy). Recently, however, in a proceeding in Pennsylvania and in *ex parte* filings, MCI itself has made clear its departure from the ranks of those who support the original BCM. In the Pennsylvania proceeding, AT&T and MCI sponsored the introduction of the Hatfield material. And see Letters from Leonard S. Sawicki, MCI to W. Caton, FCC, filed Mar. 28, 1996 and Apr. 9, 1996.

[13] In our opening comments, U S WEST indicated that a number of enhancements are currently planned to be made to the BCM/ARMIS. See U S WEST Comments at App. A. These changes will advance the BCM's ability to more accurately reflect distribution plant in urban areas.

The BCM/ARMIS is the model that provides the best targeting of customers who reside in areas that are high cost to serve. Its adoption and utilization would permit the Commission to meet its Congressional mandate to assure affordable basic service for all Americans. It would also promote the Commission's ability to craft a specific and predictable support mechanism.[14] In all of its particulars, the BCM/ARMIS is the proxy model most consonant with the goals of a properly and prudently-designed universal service HCF.

B. BellSouth's Criticisms Of An Optimized Network Model

BellSouth[15] states that an optimized network model, like the BCM, provides only the lower bound of costs of serving an area.[16] It suggests that this "lower bounding" is an inappropriate method for determining an amount to provide as an explicit subsidy for serving a high-cost area. U S WEST obviously disagrees.

Use of an incumbent LEC's historical costs, which undoubtedly would be above the "lower bound," misstates the current economic realities that new entrants face in serving a new area.[17] Use of the BCM/ARMIS ensures that all carriers make economically based decisions about whether to serve a specific geographic area at this point in history, considering the currently available technology,[18] with the decision to serve or not to serve uninfluenced by the presence or absence of targeted high-cost funding.

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[14] Telecommunications Act of 1996, 110 Stat. at 72, § 254(b)(5).

[15] See BellSouth Comments at Att. A (NERA Comments on Universal Service), p. 40.

[16] Id. at Att. A, p.38 ("the optimization process usually succeeds only at providing the lower bound on incremental costs").

[17] Id. at Att. A, p. 39 ("While such a model may well serve as a predictor of costs for a new network, it cannot possibly depict costs of an existing network with its inherent rigidities.") (emphasis in original).

[18] Even if the BCM/ARMIS were "corrected" with respect to certain fundamental Total Service Long-Run Incremental Cost ("TSLRIC") attributes (see note 37, infra), the BCM would not represent any individual company's TSLRIC for at least four reasons. First, the BCM uses national level cost data for the major network components, where individual companies' material prices are based on company-specific contracts. Second, the structure costs of the network are also based on national average contractor prices. Third, individual companies

That is not to say, however, that the use of BCM/ARMIS -- with its "lower bounding" -- is appropriate for other purposes. It is not. As we indicated in our opening Comments[19] and as we stress again here, costs that are calculated by optimized models, such as the BCM, should not be used as the determiner of the price that an individual carrier (whether incumbent or new entrant) charges for its service. Rates for a service should be designed to recover actual costs.

Each carrier's price for a service should reflect its own costs, based upon its own network. Carriers need to and should be allowed to rebalance their rates to ensure the recovery of their costs. In this way, competing carriers in an area receive the same explicit high-cost subsidy but may charge different prices for similar services, reflecting different underlying cost structures or different market values of the service.

II. INAPPROPRIATE ATTEMPTS TO "LRIC"-IZE THE BCM

A. BCM Purpose

In the Executive Summary of the BCM filing, the Joint Sponsors clearly describe the purpose of the study: "The purpose of the BCM is to identify areas where [the] cost of service can reasonably be expected to be so high as to require explicit high cost support for the preservation of universal service."[20] In the December 1, 1995 letter transmitting the 49-state BCM results, the Joint Sponsors stated that they "support[ed] the use of the BCM for the analysis of the targeting of explicit high cost support. They do not agree on its use for other purposes such as the setting of rates for telephone service."[21]

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may use forward-looking technology or mix of technologies different than the BCM. Finally, the BCM utilizes a hypothetical network design and does not attempt to replicate any individual company's network arrangements.

[19] Comments of U S WEST at 12 n.25.

[20] Attachment to Letter from Glenn Brown, U S WEST, Inc., et al. to William F. Caton, FCC, filed Dec. 1, 1995, at I-2 (Executive Summary).

[21] See note 2, supra.

Despite these clear statements of the scope and limitations of the BCM, certain parties continue to misrepresent the BCM calculations as providing the total loop cost for the provision of local service. Such misrepresentations find their way into this proceeding through studies made by Hatfield Associates (on behalf of MCI) and Economics and Technology, Inc. ("ETI") (on behalf of NCTA).[22]

In light of its limited purpose, the BCM does not -- in fact or by intention -- calculate all the investments associated with providing the loop portion of basic service.[23] The BCM is not, and was not designed as, a proxy model to calculate Long-Run Incremental Costs ("LRIC") or TSLRIC for pricing purposes.

Rather, the BCM was designed to target high-cost areas. The BCM is a high-level engineering process model that identifies the major cost components of residential service that differentiate high-cost CBGs from low-cost CBGs. It was designed specifically to identify high-cost CBGs, to quantify the costs of providing telephone service to customers in these CBGs, and to establish funding support relative to a Federal Funding Benchmark ("FFB").

In order to perform this task, the Model inputs very detailed geographic information and then applies high-level engineering designs of the major cost components of basic service. The Model includes only the network cost drivers that contribute to the differentiation between high-cost and low-cost areas. The high-level engineering approach of the BCM was utilized to keep the complexity of the Model to a manageable level, while allowing use of the most important cost drivers.

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[22] See *Ex Parte* Letter from Leonard S. Sawicki, MCI, to W. Caton, FCC, filed Mar. 28, 1996 (The Cost of Basic Network Elements: Theory, Modeling and Policy Implications, prepared by Hatfield Associates for MCI, pp. 12, 16) and Comments of NCTA at Att. A (The Cost of Universal Service: A Critical Assessment of the Benchmark Cost Model, by Economics and Technology, Inc., p.180).

[23] See Surrebuttal of Peter B. Copeland, USWC, in Docket No. 95-2206-01, before the Utah Public Service Commission, May 1, 1996, at 6 (attached hereto as Appendix C) and Direct Testimony of Robert A. Mercer, AT&T, in Docket No. 95-2206-01, before the Utah Public Service Commission, Mar. 14, 1996, at 5 (attached hereto as Appendix D).

As a result, the BCM does not quantify the capital costs of all investment in plant and equipment and the direct expenses associated with a LRIC study. For example, the BCM currently utilizes a simplified architecture for distribution plant that produces an accurate portrayal of rural distribution plant, but severely underestimates distribution costs in urban areas.[24] **This simplification has very limited impact on the BCM's ability to identify high-cost CBGs.** However, in order to develop a LRIC cost for a total service, all the relevant cost components of providing that service would have to be included in the study.

While it is clear that one cannot extract from the BCM an accurate total local service cost (because the Model does not contain the investments for all network components necessary to provide local service and urban distribution costs are underestimated), that does not render the Model unsuitable or unreasonable with respect to identifying high-cost CBGs -- the purpose for which the Model was designed. The BCM is not fairly or logically subject to criticism for not doing what it was never designed to do or not including variables that are irrelevant to its purpose.

Arguments that a LRIC model, rather than the basic BCM, better identify high-cost service areas and that such a LRIC model should have different variables than those included in the BCM are largely, and logically, misplaced. They should be rejected because they are off the mark.

The Commission should not be persuaded by those who attempt to disassociate the BCM from its foundation or to gain immediate credibility by associating other models with the BCM. For example, in some circumstances the BCM is claimed to be "accepted," followed almost immediately by arguments pressing for changes in certain of the BCM's most basic assumptions or attacking the BCM for not having different (usually LRIC) assumptions (which would, of course, lead to different outcomes).

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[24] Any model that utilizes the BCM or the loop portion of the BCM, as the Hatfield Model purports to do, also will produce results with a low calculation of urban distribution plant. For LRIC purposes, this underestimation would have to be corrected.

In other circumstances, what commentors describe as the "BCM Model" has become so different from the original Model (and its supporting assumptions) that calling the reformatted, reconfigured model the "BCM" is both factually incorrect and borderline unethical. With further examination of the pseudo-BCM models, we hope clarity will be achieved. We are also hopeful that the detractors of the BCM will find their arguments rejected.

The basic BCM is a tool well suited to identifying high-cost CBGs -- its intended purpose. A LRIC model is not better suited to the task. With respect to the matter of providing service to customers living in high-cost areas, an inappropriately designed LRIC model could incorporate factors that are not necessarily relevant, that are -- at a minimum -- contentious, but which are in all instances calculated to "drive down" -- in an economically artificial way -- the cost of providing service to these customers.

At least with respect to certain LRIC studies and arguments (such as those proffered by Hatfield and ETI), the variables chosen as "substitutes" for certain of the BCM variables or assumptions are variously not relevant to identifying high-cost CBGs (although they might be relevant to identifying high-cost wire centers), are not independently verifiable, or employ assumptions that are not realistic from an economic perspective. Upon examination, it appears that each and every variable that can be included to reduce the calculated cost of service to customers is included, even when the validity of the variable cannot be independently tested or defies logic and reason.

Furthermore, the models incorporate inappropriate averaging of costs by utilizing wire centers as their basic geographic units. While wire centers will allow a cost averaging to occur, which in turn could reduce the overall amount of a federal universal service fund (in turn, reducing the amount that carriers have to contribute), the averaging is less than desirable from an economic perspective and should be from a policy perspective.

Averaging makes implicit what should be explicit -- in-town areas are generally not high cost, while away-from-town areas are. For this reason alone, the adoption of any proxy model that incorporates wire center

targeting, rather than CBG targeting, should be rejected. CBGs, not wire centers, produce the best targeting of high-cost customers. There is simply no way around it.

B. Hatfield Associates Study

MCI, one of the original Joint Sponsors, has chosen to work with Hatfield Associates to "change" or "correct" the original BCM. Contrary to the conclusions of some, the Hatfield Model cannot fairly be said to "incorporate[ ] elements of the [BCM which] has been presented to the FCC."[25] What it can be "fairly said" to incorporate is not clear. So far, Hatfield has not permitted third parties to engage in the kind of analysis necessary to determine whether there is any original BCM material left.

During the time MCI was working on the BCM with U S WEST and the other Joint Sponsors, it was also working with AT&T and Hatfield to develop the Hatfield Study. That Study purports to incorporate some elements and algorithms of the BCM (which cannot be verified, as discussed more below). However, the Study makes a number of changes to key BCM assumptions and algorithms which differ significantly from the consensus assumptions and algorithms developed and agreed to by the Joint Sponsors.

What changes or modifications have been made to the original BCM is impossible to verify.[26] While the Hatfield Model claims to "use" certain components of the BCM in producing its output, the BCM is subjected to

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[25] Washington Utilities and Transportation Commission v. USWC, Docket No. UT-950200, Fifteenth Supplemental Order, at Part 5, II, A, 3.

[26] While Dr. Mercer has testified that the model incorporates three of the four BCM modules: 1) the BCM input data (which assigns CBGs to the closest central office, determines the CBG's spatial relationship to the CBG, and lists the USGS terrain data associated with the CBG); 2) a module which determines the feeder quadrant on which a CBG is served, the feeder plant distance, the distribution plant distance, and the terrain structure multipliers applicable to the CBG; and 3) a module which designs the feeder and distribution plant with the appropriate sharing of feeder plant, the associated structure and the total investments involved for the major cost drivers contained in the model (see Direct Testimony of Robert A. Mercer, supra note 23, at 6-7), the inability to independently verify any of this requires a leap of faith to assume that the Hatfield Study actually incorporates intact the original BCM modules.

unverifiable and seemingly arbitrary changes from the logic and factors developed by the Joint Sponsors. While U S WEST has been unable to determine precisely what all the changes are,[27] the changes all have -- not surprisingly -- a common attribute: the reduction in the apparent cost of providing basic telephone service, with a concomitant claim for a smaller -- rather than a larger -- HCF.

Despite requests by U S WEST to review an electronic version of the Hatfield Model, no such version has been provided. While a limited number of U S WEST employees were able to view a portion of the model on April 25, 1996, at the Hatfield Associates offices in Boulder, Colorado, that "viewing" opportunity was -- to say the least -- disappointing. Two of the BCM modules were not available for U S WEST to inspect. Not only were requests for electronic versions of the two BCM modules refused, but requests for inspection of the Hatfield runs of the BCM were also refused. Furthermore, U S WEST personnel were advised that while they could examine the model on premises, they were not to ask questions.[28]

On Friday, May 3, 1996, U S WEST personnel were advised that a change in position had occurred on the part of Hatfield. We were advised that we would now be permitted to have certain access to the Hatfield study/computer model. However, the precise parameters of that access were not made clear. (Thus, for example, we do not know if we will be permitted to ask questions.)

Furthermore, due to the current schedule of the U S WEST employee with the primary subject matter expertise on the BCM, it is clear that no analysis will be possible prior to the time these Reply Comments are filed.

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[27] See Surrebuttal Testimony of Geraladine G. Santos-Rach, USWC, in Docket No. 95-2206-01, before the Utah Public Service Commission, May 1, 1996, at 6 (attached hereto as Appendix E). And see Rebuttal Testimony of Peter B. Copeland, USWC, in Docket No. 95-2206-01, before the Utah Public Service Commission, at 24-26 (attached hereto as Appendix F) for a discussion of what U S WEST has been advised was changed in the original BCM module and how those represented changes would affect the Study.

[28] See Surrebuttal of Peter B. Copeland, supra note 23, at 4.

And, it is unclear when any analysis -- once begun -- would be completed.[29] In fighting wars involving "dueling models," timing is everything. And here, Hatfield has managed to delay permissible inspection to the point where an inspection, once completed, could be meaningless.

In short, the type of inspection regime devised by Hatfield (and, apparently supported by some carriers)[30] renders it impossible to understand how the Hatfield model works, much less to validate its results. And, other than verbal assurances, there has been no ability to ascertain, let alone ensure, that the algorithms or calculations incorporated from the BCM modules had not been modified. It is impossible to determine, for example, whether the fundamental logic of the Model has been changed.

The "black box" approach to testimony and commentary renders it impossible to find the Hatfield Study verifiable or suitable, despite the putative "expertise" associated with it. As far as U S WEST can tell, the modifications made to the BCM are based on undocumented assumptions,[31] improperly used data sources, or the guesses of self-described "experts" whose sole apparent purpose is to underestimate the cost of providing a local loop. This "underestimation" is, of course, important because it impacts not only universal service initiatives, but

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[29] This subject matter expert is also a U S WEST witness in state rate, universal service, and interconnection cases.

[30] AT&T had a representative at the inspection site.

[31] In Docket Nos. 95-2206-01, 2202-01 and 94-999-01 (Utah), in response to a data request from U S WEST, Dr. Mercer, indicated that no documents describing the purpose and function of the Hatfield Model exist; no documents describing the methods and procedures used in the Model exist; and that Dr. Mercer's testimony was the sole source of the Model's assumptions. With respect to certain critical input data, Dr. Mercer indicated that the basis of certain Model assumptions were "conversations we have had over the years with LEC staff involved in [Digital Loop Carrier] procurement...." Direct Testimony of Robert A. Mercer, supra note 23, at 7. Those conversations were not, according to Dr. Mercer, recorded. Essentially, Hatfield appears to have made input changes based on educated guesses, rather than on first-hand knowledge or on sources that could be documented or validated.

those dealing with interconnection and resale of local services, as well.[32] Thus, these "experts" have every reason to argue for less, rather than more, costs associated with local service provisioning.

Contrast this approach with that of the Joint Sponsors. The Joint Sponsors designed the BCM for a single purpose. They made it available for full public scrutiny so that commenting parties could suggest modifications to the model to improve its ability to target high-cost support. The original filing of the BCM included a copy of the computer software for the Model, as well as full documentation of the model algorithms, cost data, and Model data for six states.[33]

C. NCTA/ETI Analyses

The comments of NCTA contained, in an Attachment authored by ETI, the most comprehensive evaluation of the BCM to date. While U S WEST is gratified by certain of ETI's more laudatory observations about the BCM,[34] we are less than supportive of the way in which ETI wrongfully appropriated the BCM's contents and the way in which it "corrected" the BCM for what it considers to be existing BCM deficiencies. This is particularly the case as ETI's "corrections" are often in the holy name of appropriate "LRICness," yet are sometimes internally inconsistent and other times at odds with logic.

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[32] See In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, Notice of Proposed Rulemaking, FCC 96-182, rel. Apr. 19, 1996, at ¶ 134 ("Interconnection NPRM").

[33] Later, on November 1, 1995, the Joint Sponsors filed data for 17 additional states; and, on December 1, 1995, data for all remaining states, except Alaska. The December 1st filing included a written summary of data for 49 states, plus Washington, D.C., as well as CD ROMs that included all the detailed computer runs for each state.

[34] "The BCM represents what may be the most comprehensive attempt to date to develop an objective national model of the cost of providing basic residential local exchange service....The BCM satisfies many of the essential attributes of a useful cost proxy model, and can be a valuable tool for achieving the universal service and local competition policy goals and mandates of the *Telecommunications Act of 1996*." ETI, The Cost of Universal Service: A Critical Assessment of the Benchmark Cost Model, supra note 22, at iii-iv.

As an initial objection, we note that ETI violated the BCM license agreement and copyright by intentionally overriding the main logic password protection and changing the model logic.[35] While the Commission is certainly not a copyright enforcer, it should not countenance, much less approve or endorse, such unlawful and unethical conduct. Above and beyond ETI's unlawful conduct, however, U S WEST demonstrates in the attached Appendix A that ETI's "corrections" are variously internally inconsistent, self-serving, and sometimes just plain illogical.

ETI begins its analysis with the definition of a "proper" proxy model. It states that such a model should develop TSLRIC.[36] While this "long-run" approach is appropriate for a TSLRIC model, and might actually be something the BCM could accommodate, the BCM does not take this view of "long run" in its current modeling.

Nor do ETI's demand assumptions support its "definition" of "long-run." In fact, ETI feels free to wander between long-run outlooks and historical outlooks at will, utilizing whichever outlook develops the lowest possible cost. This is true regardless of whether these reductions are based on sound economic or engineering principles, or even on common sense.

In a similar vein, ETI switches from total service demand definitions to incremental demand definitions as best serves ETI's purpose. As far as can be determined, the only "logic" to its purpose is to lower the cost calculated by the BCM.

One of the more egregious illogical assumptions employed by ETI is its assumption that single line residential service is a static, non-growing service, unchanging and totally predictable. This "definition" of single-line residential service bears no resemblance to the real world or sound forecasting. Yet, it forms the foundation

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[35] See id. at 112 n.166. See also Letter from Attorney Judson D. Cary, U S WEST, Inc. to L. Selwyn, Economics and Technology, Inc., dated Apr. 26, 1996 (attached hereto as Appendix G).

[36] ETI, The Cost of Universal Service: A Critical Assessment of the Benchmark Cost Model, supra note 22, at 15.

for many of ETI's "economies of scale" corrections, the most basic of which is a 95% fill factor for the utilization of plant facilities. ETI's arguments in this area are obviously results driven, in an effort to assign all economies of installing a unified network, but none of its related costs, to universal service.

Finally, ETI's analysis concludes that both the price inputs to the BCM, as well as the BCM's expense components are inaccurate. ETI then substitutes its "accurate cost data," which are shown to be the guesses of self-described "experts," whose sole purpose is to underestimate the cost of providing local residential service.

Overall, ETI's corrections are not designed to increase the engineering validity of the BCM, nor to apply more consistent economic principles. ETI's sole purpose is to lower the cost of universal service as calculated by the BCM. Unfortunately, the changes to the BCM that ETI is promoting do not reduce the true cost of universal service, they succeed only in ignoring them.

D. Back To Basics

The BCM is not a LRIC model, either generally or of a specific company. If it were, admittedly it would contain certain additional information and certain of its basic assumptions would be different.[37] Thus, those who attack the Model for not having that information or making those assumptions raise totally immaterial objections.[38]

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[37] The BCM is not a TSLRIC study of basic local service, although it uses forward-looking technology for its investment base. There are a number of areas where the BCM methodology departs from general TSLRIC principles. The two most important areas of difference are: 1) The BCM does not include long-run demand for local service that matches a long-run planning horizon generally defined by TSLRIC studies as a period of time long enough so that cost estimates are based on the assumption that all inputs are variable (see ETI, The Cost of Universal Service: A Critical Assessment of the Benchmark Cost Model, supra note 22, at 15; AT&T Comments at App. A.), and 2) The BCM's annual expense factors are based on historical relationships, not on forward-looking studies for the provision of basic service (see Rebuttal Testimony of Peter B. Copeland, supra note 27 at 13). And see note 18, supra.

[38] Additionally, those who attack the BCM from a LRIC perspective do not themselves proffer what U S WEST would characterize as sound LRIC arguments or analyses, in any event. See discussion immediately below.

While some proxy models might well be "multiple-use" models, capable of appropriate use for various purposes and with various goals, the BCM is not such a model. It is a "single" purpose model.[39] Varying the Model has a cascading effect. For example, does the variation change an assumption or add one? What is the effect of modifying an existing assumption? What is the effect of adding an assumption on the existing assumptions? With each variation come argument and disagreement over the changes, the purposes of the changes, and the validity of the changes with respect to the purpose to be achieved, as well as an analysis of the materiality or irrelevancy of the changes. As important as the variations themselves are in changing the possible outcomes is the fact that the consensus or agreement about and around the Model itself disappears. What appears in its place is dispute and contention.

The BCM was proffered by a group of Joint Sponsors. Those Joint Sponsors are in support of certain changes to the Model. Other variations, however, such as those proposed by Hatfield and ETI, are not changes about which there is general or wide-spread agreement. The changes that the Joint Sponsors have not agreed to are, predictably, changes that will affect the balance and lack of bias reflected in the current BCM changes. Those changes should be resoundingly rejected.

III. UNIVERSAL SERVICE IS A MATTER OF SIGNIFICANT FEDERAL INTEREST AND SHOULD BE APPROACHED FROM SUCH A PERSPECTIVE

The filed comments demonstrate that some commentors argue for an exceedingly parochial approach to universal service funding.[40] These arguments would maintain that in examining the cost of basic telephone service for purposes of assuring affordable service for all Americans, the Commission should limit itself to the

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[39] In the Executive Summary of the BCM results transmission it was stated that the purpose of the study was "to identify areas where [the] cost of service can reasonably be expected to be so high as to require explicit high cost support for the preservation of universal service." Note 20, supra.

[40] See, e.g., MCI Comments at 4-5; BellSouth Comments at 9.

roughly 25% of costs which are assigned to the interstate jurisdiction through the separations process. The remaining 75% of costs which are assigned to the state jurisdiction would be addressed and supported solely at the state level.

Such arguments are at odds with the clear expectation reflected in the 1996 Act that the Commission's jurisdiction over and interest in universal service matters are extremely broad.

As U S WEST stated in our opening Comments, the nationalist and federalist approach to universal service, long a part of the universal service agenda incorporated in the Communications Act of 1934 and the Commission's interpretations and implementation of that Act, are re-enforced and embellished by the 1996 Act.[41] The 1996 Act makes evident the extent to which universal service considerations are to be framed, addressed, and ultimately resolved in favor of the United, rather than the separate, States.

The 1996 Act requires, as a guiding principle of this federalism, that it is the policy of the United States "to make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex a rapid, efficient, nationwide, and world-wide wire and radio communication service with adequate facilities at reasonable charges."[42] The 1996 Act is replete with references to and the need for access to basic telephony, information services, and advanced telecommunications services.[43] These services are clearly expected to contribute to economic development, enhance educational opportunities, and provide for broad-based health care services for the "people of the United States."

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[41] U S WEST Comments at ii, 1-2.

[42] Telecommunications Act of 1996, 110 Stat. at 86, § 104, amending 47 USC § 151. See also id., 110 Stat. at 72, § 254(b)(3).

[43] See id., 110 Stat. at 71-72, § 254(b).

The acknowledgment in the 1996 Act that access to telephony and information services is critical in an information age, and that such access can render less material the heretofore commercial and personal significance of disparate geographies that comprise and separate the Eastern corridor from the Great Plains, is a legislative pronouncement that must guide the Commission in all of its universal service deliberations. In an environment where numerous telecommunications carriers are operating in a market, offering divergent communications services over combinations of landline and wireless technologies, state services and interstate services become virtually indistinguishable.[44] In such an environment, only a federal regulatory agency can ensure that all telecommunications providers contribute fairly and appropriately for the preservation and advancement of universal service. Only a federal agency can establish the appropriate national parameters necessary to support a national universal service infrastructure, an infrastructure that is properly targeted, appropriately sized for the needs to be addressed, and which provides a base level of national support to address universal service issues.

Furthermore, connecting every potential subscriber who wishes access to the public switched network generates benefits that go beyond state boundaries. These external benefits need to be recognized in the funding of universal service. It would be a lost opportunity for the nation if the federal government failed to use its influence in ways that correct localized deficiencies and that contribute to national development.

While the 1996 Act clearly outlines a significant role for the States, through the vehicle of Joint Board participation, eligibility determinations, and state universal service funds, it also demonstrates that -- without question -- the provision of universal service and the affordability of the link/line that allows such service to be

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[44] Telecommunications services, by their nature, exist without regard to state boundaries. Indeed, many of these services are provided via airspace above and across multiple state boundaries. While the retail delivery of telecommunications services might well exist in a locality or a state, the business of telecommunications, the planning for telecommunications services rarely -- if ever -- is state-specific. Compare the Commission's recently issued Interconnection NPRM wherein the Commission acknowledges (albeit in a somewhat different context) that "[i]t would make little sense, in terms of economics, technology, or jurisdiction, to distinguish between interstate and intrastate components." Interconnection NPRM ¶ 37.

realized is profoundly a matter of federal concern. Affordable telecommunications and information access should be realized as much in Wyoming as in New York, as much in Denver, Colorado, as in Dolores, Colorado.

Particularly as framed by the 1996 Act, universal service is first and foremost a national agenda. The goal is driven not just by a desire to physically connect callers "from sea to shining sea," but to provide comparable services at affordable rates to the citizens of the United States, from the young ones in kindergarten to the citizenry in need of critical health care services, whether living in urban or rural areas. This federal agenda must form the predicate for Commission action in the area of universal service.

It is critical that the Commission keep in mind that Congress envisioned the universal service issue as one to be addressed universally -- not regionally, not state-by-state. A system that transfers "funds" from the East Coast region to the midwest is not fundamentally flawed in design. Rather, it is a system that accomplishes the Congressional goal. A system that acknowledges that the "federal interest" in universal service is clearly more than 25% is not one inconsistent with rational universal service policy. Rather, it is one that acknowledges that -- given the legislative mandates in the area of universal service -- the federal interest in accomplishing a forward-looking universal service agenda is substantially greater than some previously and arbitrarily determined "25% of the local loop costs."

This is not to diminish state interest in universal service. The role of state agencies is indispensable. However, each state alone cannot solve its historical universal service dilemmas. Not all states are well suited to deal with universal service problems acting in a state-by-state capacity or on a state-by-state basis. If a substantial portion of the funding burden is returned to the individual states, then those heavily rural, high-cost states will not be able to support the fund sizes necessary to keep their rural rates comparable with those rural areas in states that are more urbanized.

IV. USF FUNDING SHOULD BE DONE THROUGH A RETAIL REVENUE ASSESSMENT

The most competitively neutral, broadly based funding mechanism proposed in the initial round of comments for funding universal service is an end-user surcharge on all telecommunications carriers' retail revenues. This funding methodology was proposed and supported by a substantial number of commenters.[45]

However, while it supports the idea of a surcharge on retail revenues generally, AT&T argues that a "surcharge credit" for telecommunications services that are purchased and used for resale should be incorporated into the USF funding model.[46] AT&T is concerned there will be a double count of the assessment in the resale scenario.[47] AT&T's concern is unfounded.

Retail revenues are revenues collected from the ultimate end user of a service. AT&T would not be such an end user. It, therefore, would not be required to pay the surcharge. Instead, resellers would be considered wholesale purchasers of the services they purchase from a facilities-based carrier and then sell, in turn, to end users. There would, therefore, not be a double count of the assessment.

The self interest of those commentors supporting a "gross revenues net of payments made to other carriers" funding model is self evident. This support comes from those carriers who stand to benefit competitively from this position -- specifically, MCI, Sprint, and competitive access providers.[48]

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[45] See, e.g., AT&T Comments at 8 ("A surcharge on all retail telecommunications services, both interstate and intrastate, creates a fair, simple and efficient recovery mechanism."); GTE Comments at 16 (proposing that funding should be obtained on the basis of a single, uniform surcharge applied to all end-user transactions).

[46] See AT&T Comments at 8 n.10.

[47] It appears evident from AT&T's Comments that it believes it will have to pay a facilities-based carrier a surcharge on services AT&T buys in order for it to sell those services to an ultimate end user. AT&T Comments at 8 n.10 ("to avoid any double count, resellers would certify the portion of the telecommunications services that they purchased which are used for resale and apply to the NUSF administrator for a surcharge credit for those exempted purchases"); 22 ("surcharge credits to resellers for the surcharge they pay to their facilities-based carriers" would have to be part of the USF funding process).

[48] See MCI Comments at 16; Sprint Comments at 17; see, e.g., MFS Comments at 16.

As demonstrated in U S WEST's initial Comments, basing payments into the USF on gross revenues net of payments made to other carriers is not competitively neutral.[49] When the incumbent provider must impute charges into its rate structure for like services it sells to competitors, the incumbent provider should be allowed to deduct these same charges from its gross revenue assessment, as its competitors will under a net-of-payments proposal. The significant administrative burdens of netting out payments made to other providers and corresponding imputed charges are not only unnecessary, but could lead to the need for additional audit oversight that will not be needed under the retail revenue approach.

Clearly, the easiest proposal to administer is the end-user surcharge on retail revenue. This funding model also benefits from the fact that it is broadly based and competitively neutral. In all of its particulars, it is a sound economic model that can clearly be deployed in the promotion of the overall national public interest.

V. CONCLUSION

With respect to the purposes for which it was designed, the BCM is clearly the most reasonable proxy model to utilize in targeting customers who are high cost to serve. It has been publicly produced, scrutinized, and subjected to constructive critcisms. It will be modified in the future to incorporate certain enhancements that will allow for even better targeting. The BCM is a powerful targeting tool.

From a competitive perspective, the BCM benefits from its competitive neutrality. It favors neither incumbent LECs nor new entrants. In this respect, the BCM is an appropriately moderate tool. The Commission should adopt the BCM as providing the best tool for high-cost support targeting.

Within its universal service considerations, the Commission must assume the leadership role that the 1996 Act provides. That role is not confined or defined by the Commission's current separations rules. Universal service considerations are, by their nature and by federal legislative pronouncement, national considerations. The

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[49] U S WEST Comments at 18-20 and App. B.